

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
2 December 2004 (02.12.2004)

PCT

(10) International Publication Number  
**WO 2004/105326 A3**

(51) International Patent Classification<sup>7</sup>: **H04L 12/40**,  
H04J 3/06, G06F 11/20, H04L 7/10, G06F 11/16

(21) International Application Number:  
PCT/IB2004/050627

(22) International Filing Date: 10 May 2004 (10.05.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
03101434.3 20 May 2003 (20.05.2003) EP

(71) Applicant (for DE only): **PHILIPS INTELLECTUAL  
PROPERTY & STANDARDS GMBH** [DE/DE]; Stein-  
damm 94, 20099 Hamburg (DE).

(71) Applicant (for all designated States except DE, US):  
**KONINKLIJKE PHILIPS ELECTRONICS N. V.**  
[NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven  
(NL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **UNGERMANN**,

Jörn [DE/DE]; c/o Philips Intellectual Property & Stan-  
dards GmbH, Weissshausstr. 2, 52066 Aachen (DE).  
**FUHRMANN, Peter** [DE/DE]; c/o Philips Intellectual  
Property & Standards GmbH, Weissshausstr. 2, 52066  
Aachen (DE).

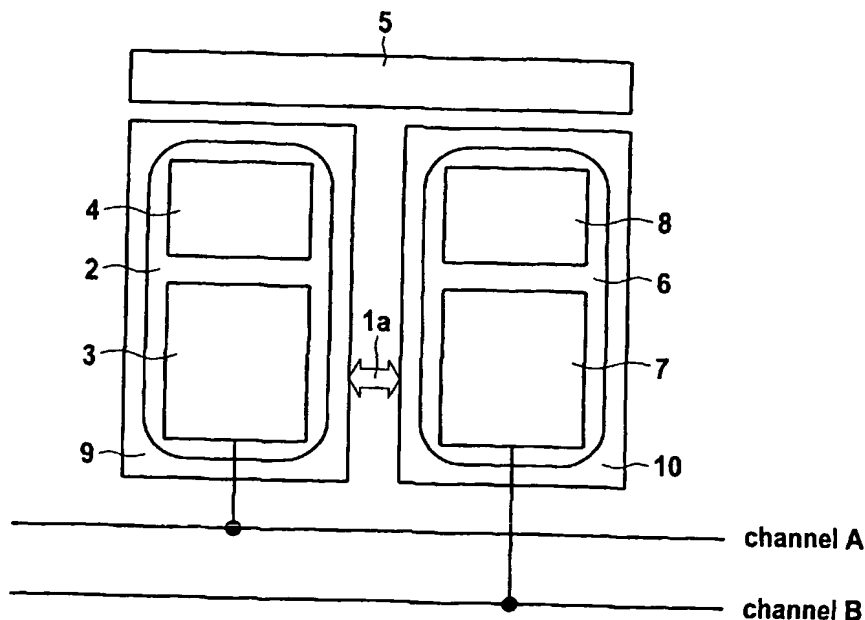
(74) Agent: **VOLMER, Georg**; Philips Intellectual Property &  
Standards GmbH, Weissshausstr. 2, 52066 Aachen (DE).

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

[Continued on next page]

(54) Title: **TIME-TRIGGERED COMMUNICATION SYSTEM AND METHOD FOR THE SYNCHRONIZED START OF A  
DUAL-CHANNEL NETWORK**



(57) Abstract: A dual-channel network with in each case one communication controller (2, 6) for each of the two channels (A, B). In order to ensure that the two channels (A, B) operate on a temporally matched basis, an exchange of current states ("ready, "abort") takes place via an external or an on-chip interface (1 a, 1 b). The cold start operation is carried out only if, and so long as, both communication controllers are in the "ready" state.



European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(88) Date of publication of the international search report:  
20 January 2005

**Published:**

— with international search report

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/IB2004/050627

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H04L12/40 H04J3/06 G06F11/20 H04L7/10 G06F11/16

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04L H04J G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EP0-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 467 003 B1 (TOPIC MICHAEL ET AL) 15 October 2002 (2002-10-15) abstract column 1, line 61 column 31, line 65 column 6, line 5 column 23, line 5 column 23, line 20 figure 4	1-19
A	ANONYMOUS: "Chip set PSS SB CHIPSET0" SAFE BUS SYSTEMS, [Online] 22 August 2000 (2000-08-22), XP002294998 Retrieved from the Internet: URL:www.pilz.jp/pdf/downloads/pss_sb_chips et0.pdf> [retrieved on 2004-09-06] figure 1 ----- -/-	6

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

6 September 2004

Date of mailing of the international search report

05.11.04

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Schneider, G

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/IB2004/050627

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 447 576 A (TANDEM COMPUTERS INC) 25 September 1991 (1991-09-25) column 15, line 43 -----	5
A	JOHN RUSHBY: "A Comparison of Bus Architectures for Safety-Critical Embedded Systems" INTERNET ARTICLE, [Online] 1 March 2003 (2003-03-01), pages 1-52, XP002294999 Retrieved from the Internet: URL:techreports.larc.nasa.gov/ 1trs/PDF/2003/cr/NASA-2003-cr212161.pdf> [retrieved on 2004-09-06] the whole document -----	

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/1B2004/050627

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 6467003	B1	15-10-2002	US 6052753 A	18-04-2000
EP 0447576	A	25-09-1991	EP 0447576 A1	25-09-1991